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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,487	01/25/2002	Toshio Yamagiwa	107348-00178	5676
4372	7590	06/28/2004	EXAMINER	
ARENT FOX KINTNER PLOTKIN & KAHN 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			FISCHER, JUSTIN R	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

*Handwritten signature*

# Office Action Summary

Application No.

09/926,487

Applicant(s)

YAMAGIWA, TOSHIO

Examiner

Justin R Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 4 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As amended, independent claim 2 requires "said sealant chamber having a transverse cross section comprising left and right ends, wherein the left end of the transverse cross section is proximate the left end of the inner liner, and the right end of the transverse cross section is proximate the right end of the inner liner". Applicant contends that support for this limitation is provided in Figure 1. However, Figure 1 does not appear to define such an arrangement. In particular, the left and right ends of the sealant chamber appear to be located at a radial height slightly inward of the shoulder region while the left and right ends of the inner liner 3 are located adjacent the rim 9 in the respective bead regions. It is the examiner's position that the ends of the chamber and the ends of the inner liner 3 are not proximate one another as required by the claimed invention. For examination purposes, the construction depicted in Figure 1 will be taken to define the limitations set forth by independent claim 1 (in view of applicant's position that Figure 1 supports this arrangement).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chemizard (US 4,286,643, of record) and further in view of Laube (US 5,426,147, of record). Chemizard and Laube are applied in the same manner as set forth in the Non-Final rejection dated December 8, 2003.

As best depicted in Figure 1, Chemizard teaches a sealant-containing, pneumatic tire construction comprising an outer liner (6, 21) fastened to the inner surface of the tread and an inner liner (5) fastened to the inner surface of a sidewall of the tire body, wherein a sealant composition is arranged within the boundaries defined by the inner and outer liners. While Chemizard fails to expressly describe the outer and inner liners as being formed of "anti-sticking" properties, one of ordinary skill in the art at the time of the invention would have found it obvious to form the liners of Chemizard in accordance to the limitations of the claimed invention as they define common and well known liner compositions. It is noted that the inner liner of Chemizard is suggested as being formed of an airtight rubber (Column 1, Lines 50-55)- one of ordinary skill in the art at the time of the invention would have recognized butyl rubber as being the most common "airtight rubber", as shown for example by Laube (Column 1, Lines 10-20), it being further noted

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that butyl rubber is the suggested inner liner material by the claimed invention.

Regarding the outer liner, it is extremely well known in the tire industry that natural rubber is used to form a plurality of tire components and in particular, it is commonly used when improved adhesion is desired, as would be the case in Chemizard (e.g. it is necessary to provide large degree of adhesion between outer liner and tire body). In this instance, the outer liner of the claimed invention is defined as being natural rubber. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the inner and outer liner of Chemizard from formulations having "anti-sticking" properties. Also, regarding the "anti-sticking" properties, it is clearly evident that additional compositions having "anti-sticking" properties would have been within the purview of one of ordinary skill in the art at the time of the invention.

It is initially noted that applicant contends that Figure 1 (of the original disclosure) supports an embodiment in which the ends of the chamber and the ends of the inner liner are proximate one another. As set forth in the 112, 1<sup>st</sup> Paragraph rejection above, it is not believed that the respective ends are proximate one another. Furthermore, it is emphasized that Figure 1 of Chemizard and Figure of the claimed invention are extremely similar in that a sealant chamber is defined between an outer liner and an inner liner, wherein said outer liner is directly fastened to the inner surface of the tread and the inner liner is directly fastened to the inner surface of the sidewalls of the tire body. In this instance, the ends of the outer liner terminate in the shoulder region in an analogous manner to that depicted in the inventive tire of Figure 1. Thus, if Figure 1

discloses a proximate relationship between the respective ends, such an arrangement is similarly depicted by Chemizard.

Regarding claim 2, it is extremely well known in the tire industry to use a mixture of rubber compounds to form the tire body. In particular, natural rubber, butyl rubber, and acrylonitrile rubber are well known rubber compounds that are extensively used in the tire industry. It would have been within the purview of one of ordinary skill in the art at the time of the invention to select the appropriate mixture depending on the desired mechanical properties and thus the intended use of the tire. It is emphasized that each of the claimed mixtures would have been obvious to one of ordinary skill in the art at the time of the invention in view of their extensive use in the tire industry absent any conclusive showing of unexpected results.

***Allowable Subject Matter***

5. Claims 3 and 4 are allowed. The following is an examiner's statement of reasons for allowance:

Regarding claims 3 and 4, sealant-containing tires are extremely well known in the tire industry. In particular, there are a variety of tire designs incorporating such sealant chambers. For example, it is known to place a sealant chamber between the tire body and an innermost liner (such that sealant is adjacent tread region) or inward of a liner that is adjacent the tire body (within tire cavity). Additionally, it is known to form a sealant chamber between a first liner that is adjacent the tire body and a second liner that is inward of said sealant chamber- such a design is illustrated by Chemizard. However, the prior art references of record failed to suggest, teach, or disclose the

specific sealant chamber arrangements required by claims 3 and 4. More specifically, claim 3 requires a first outer liner that is directly fastened to the inner surface of a tire sidewall and a first inner liner that is directly fastened to the outer liner, wherein a sealant chamber is defined between the outer liner and the tread (any arrangement having sealant between tread and inner liner does not contain an outer liner directly fastened to the sidewall so the tire body). As to claim 4, this claim requires a first outer liner, a second outer liner, and a first inner liner, wherein said first outer liner is fastened to the inner surface of the tread, said second outer liner is fastened to the inner surface of the sidewalls, and said first inner liner is fastened to the inner surface of second outer liner (sealant chamber defined between inner liner and first outer liner). While sealant-containing tires having multiple liners are known, the arrangement of claim 4 is not suggested, disclosed, or taught by the prior art references of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

6. Applicant's arguments filed May 5, 2004 have been fully considered. Regarding the 112, 2<sup>nd</sup> paragraph rejections and the prior art rejections of claims 3 and 4, the arguments set forth by applicant are persuasive and as such, the rejections of these claims have been withdrawn. As to claims 1 and 2, though, the arguments are not persuasive. Applicant contends that Chemizard does not specifically disclose that the

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ends of the ribbon 6 are located at the sidewalls of the tire and further that the left and right ends of the sealant chamber are not proximate the left and right ends of the inner liner.

As noted above, Applicant states that Figure 1 of the original disclosure defines an embodiment in which the respective ends are proximate one another. Since Figure 1 of Chemizard is extremely similar to Figure of the original disclosure, it is believed that the respective ends in Chemizard are proximate one another. It is emphasized that the ends of the outer liner (strip 21) are positioned in the shoulder/upper sidewall regions in an analogous manner to the claimed invention and the ends of the inner liner 5 are positioned adjacent the bead regions in an analogous manner to the claimed invention. It is unclear how the ends of the sealant chamber and the ends of the inner liner in the inventive tire can be viewed as being proximate while the respective ends in Chemizard can be viewed as not constituting a proximate relationship.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Justin Fischer

June 18, 2004

  
JEFF H. AFTERGUT  
PRIMARY EXAMINER  
GROUP 1300